

REMARKS

Reconsideration of the pending application is respectfully requested on the basis of the following particulars.

1. In the claims

As shown in the foregoing LIST OF CURRENT CLAIMS, the claims have been amended to more clearly point out the subject matter for which protection is sought.

Claims 1 and 3 are amended to clarify that the recited structure provides for bi-directional fluid flow therethrough. It is respectfully submitted that no new matter is added, since support for the amendments may be found, for example, at least in Figs. 2B and 3B of the pending application and, for example, at least in paragraphs [0026], [0027], [0035], and [0036] of the accompanying description in the specification as originally filed, wherein the specification describes both supplying and discharging pressurized oil.

Claim 6 is amended to clarify that the structure of the leading end of the cylindrical casing acts to prevent a working fluid from freely flowing between the leading end portion of the cylindrical casing and the bottom wall of the mounting hole, and further to partition the actuation port and the pressure port. It is respectfully submitted that no new matter is added, since support for the amendments may be found, for example, at least in Figs. 2B and 3B of the pending application and, for example, at least in paragraphs [0028] and [0037] of the accompanying description in the specification as originally filed, wherein the specification describes the structure of the leading end of the cylindrical casing.

Claims 2, 4, 5, and 7 are left unchanged.

Entry of the LIST OF CURRENT CLAIMS is respectfully requested in the next Office communication.

2. Rejection of claims 1-4 under 35 U.S.C. § 102(b) as being anticipated by U.S. patent no. 4,287,912 (*Hewett*)

Reconsideration of this rejection is respectfully requested on the basis that the *Hewett* patent fails to disclose each and every recited feature of amended claims 1 and 3. The remaining claims 2 and 4 depend from either claim 1 or 3, and are therefore patentable as containing all of the recited elements of claims 1 or 3, as well as for their respective recited features.

By way of review, the embodiments of pending claims 1 and 3 require a bi-directional flow control valve, the recited structure of which allows bi-directional flow therethrough. In particular, with respect to claim 1, the flow control valve includes a cylindrical casing having therein a meter-out inlet, a valve chamber, a rod chamber for housing an adjusting rod to be axially movable, and a meter-out outlet, all communicatively connected in the recited order.

With respect to claim 3, the cylindrical casing has therein a meter-in inlet, a rod chamber for housing an adjusting rod to be axially movable, a throttle valve seat arranged substantially concentrically with the rod chamber, and a meter-in outlet, all communicatively connected in the recited order.

Claim 1 further requires the throttle valve seat to be provided on a leading end portion of the adjusting rod.

In each of claims 1 and 3, a check member is inserted in a valve chamber and is urged towards the throttle valve seat by an elastic member. Additionally, the recited structure of claims 1 and 3 requires the throttle valve seat to be positioned on the meter-out outlet side or the meter-in outlet side of the check member, which is inserted into the valve chamber.

In contrast to the embodiments of claims 1 and 3, the *Hewett* patent discloses a monoflow ball valve, which only allows flow in a first direction and seals against backflow (abstract; col. 1, lines 36-42; col. 2, lines 20-24). Specifically, the structure of the monoflow ball valve 10 of the *Hewett* patent includes a valve body 11 having an internal flow-through passage 12 concentric with and extending along the

longitudinal axis 13 of the body. The valve body 11 is arranged for the flow of fluids from an inlet end generally designated by numeral 14 to an outlet end generally designated by numeral 15. The valve body 11 contains a ball 16 which cooperates with the inside of the valve body to permit fluid flow through the inlet end via the passage and blocks flow in the reverse direction (col. 2, lines 12-26).

Thus, the *Hewett* patent fails to disclose a valve structure that allows bi-directional flow, as is required by the structure recited in claims 1 and 3. Further, a person having ordinary skill in the art at the time the invention was made would not have modified the monoflow valve of the *Hewett* patent to provide bi-directional flow, since such a modification would destroy the intended purpose of the monoflow valve of the *Hewett* patent to allow flow in only a single direction.

Additionally, the comments with regard to the deficiencies of the *Hewett* patent with respect to claims 1 and 3 provided in the response filed May 1, 2009 are incorporated by reference.

Accordingly, for the reasons discussed above, the *Hewett* patent fails to disclose every feature of amended claims 1 and 3. Therefore, withdrawal of this rejection is respectfully requested.

As mentioned above, applicants submit that independent claims 1 and 3 are patentable and therefore, claims 2 and 4, which respectively depend from claims 1 and 3, are also considered to be patentable as containing all of the elements of claim 1 or 3, as well as for their respective recited features.

3. Rejection of claims 6 and 7 under 35 U.S.C. § 102(b) as being anticipated by Japanese publication JP 39-18634 or JP 11347869

Reconsideration of this rejection is respectfully requested on the basis that the '634 publication and the '869 publication fail to disclose each and every recited feature of amended claim 6. The remaining claim 7 depends from claim 6, and is therefore patentable as containing all of the recited elements of claim 6, as well as for its respective recited features.

By way of review, the embodiment of amended claim 6 requires *inter alia* a cylindrical casing attached to a mounting hole and a leading end portion of the cylindrical casing is brought into contact with or made to approach a bottom wall of the mounting hole so as to prevent a working fluid from freely flowing between the leading end portion of the cylindrical casing and the bottom wall of the mounting hole and to partition the actuation port and the pressure port.

Turning first to the '634 publication, there is no disclosure of a cylindrical casing attached to a mounting hole and a leading end portion of the cylindrical casing is brought into contact with or made to approach a bottom wall of the mounting hole so as to prevent a working fluid from freely flowing between the leading end portion of the cylindrical casing and the bottom wall of the mounting hole and to partition the actuation port and the pressure port, as is required by amended claim 6.

As shown in Figs. 1-3 of the '634 publication, an unlabeled sealing member is mounted to an outer periphery of a main body 4, 4', which apparently corresponds to the cylindrical casing recited in claim 6. The sealing member provides a partition between the two passages 6, 6' and 7, 7' at the outer periphery of the main body 4, 4'. As shown in Figs. 1-3, a gap is provided at an upper side of an upper surface of a spring guide 14, 14', which is screwed to an upper portion of the main body 4, 4', such that liquid can freely pass through the gap.

The upper surface of the spring guide 14, 14' forms the leading end portion of the main body 4, 4', and once the main body 4, 4' is assembled, the leading end portion of the main body 4, 4' does not contact or approach the bottom wall of the mounting hole so as to prevent a working fluid from freely flowing between the leading end portion of the cylindrical casing and the bottom wall of the mounting hole and to partition the actuation port and the pressure port, but instead, the partitioning is achieved via the unlabelled sealing element and fluid can freely flow through the gap provided at the upper side of the upper surface of the spring guide 14, 14'.

Further, since the two passages 6, 6' and 7, 7' are already hermetically partitioned, there is no suggestion to use the leading end portion of the main body 4, 4' to partition these passages and to prevent a working fluid from freely flowing

through the gap provided at the upper side of the upper surface of the spring guide 14, 14'.

Further still, even if the leading end portion of the main body 4, 4' was made to contact or approach a bottom wall of a mounting hole, since the passages 6, 6' and 7, 7' are selectively connected through the center of the main body 4, 4', the use of the leading end portion of the main body 4, 4' to approach or contact a bottom wall of a mounting hole will not partition the passages 6, 6' and 7, 7'.

Accordingly, the '634 publication fails to disclose a cylindrical casing attached to a mounting hole and a leading end portion of the cylindrical casing is brought into contact with or made to approach a bottom wall of the mounting hole so as to prevent a working fluid from freely flowing between the leading end portion of the cylindrical casing and the bottom wall of the mounting hole and to partition the actuation port and the pressure port, as is required by amended claim 6, and withdrawal of this rejection is respectfully requested.

Similarly, there is no disclosure in the '869 publication of a cylindrical casing attached to a mounting hole and a leading end portion of the cylindrical casing is brought into contact with or made to approach a bottom wall of the mounting hole so as to prevent a working fluid from freely flowing between the leading end portion of the cylindrical casing and the bottom wall of the mounting hole and to partition the actuation port and the pressure port, as is required by amended claim 6.

In particular, there is no element of the '869 publication that appears to correspond to the cylindrical casing recited in pending claim 6, and thus, there is no leading end portion of the cylindrical casing to be brought into contact with or made to approach a bottom wall of the mounting hole so as to prevent a working fluid from freely flowing between the leading end portion of the cylindrical casing and the bottom wall of the mounting hole and to partition the actuation port and the pressure port, as is required by pending claim 6. Additionally, the '869 publication does not disclose partitioning the actuation port and the pressure port, as is required by amended claim 6.

Accordingly, the '869 publication fails to disclose a cylindrical casing attached to a mounting hole and a leading end portion of the cylindrical casing is brought into contact with or made to approach a bottom wall of the mounting hole so as to prevent a working fluid from freely flowing between the leading end portion of the cylindrical casing and the bottom wall of the mounting hole and to partition the actuation port and the pressure port, as is required by amended claim 6, and withdrawal of this rejection is respectfully requested.

As mentioned above, applicants submit that independent claim 6 is patentable and therefore, claim 7, which depends from claim 6, is also considered to be patentable as containing all of the elements of claim 6, as well as for its respective recited features.

4. Rejection of claim 5 under 35 U.S.C. § 103(a) as being unpatentable over U.S. patent no. 4,287,912 (*Hewett*) in view of Japanese publication JP 39-18634 or JP 11347869

Reconsideration of this rejection is respectfully requested on the basis that the rejection fails to establish a *prima facie* case of obviousness with respect to claims 1 and 3, from which claim 5 depends.

The shortcomings of the *Hewett* patent with respect to pending claims 1 and 3 are discussed above.

Further, neither of the '634 publication and the '869 publication disclose the structure of an adjustable throttle gap formed between the check member and the throttle valve seat, and the throttle valve seat formed at a meter-out outlet side or a meter-in outlet side of a check member, as is required by pending claims 1 and 3.

Accordingly, the proposed combination of the *Hewett* patent and the '634 publication or the '869 publication fails to disclose a bi-directional flow valve having an adjustable throttle gap formed between the check member and the throttle valve seat, and the throttle valve seat formed at a meter-out outlet side or a meter-in outlet side of a check member as is required by pending claims 1 and 3. Thus, a *prima facie*

case of obviousness cannot be established with respect to claims 1 and 3, from which claim 5 depends. Accordingly, withdrawal of this rejection is respectfully requested.

5. Conclusion

As a result of the amendment to the claims, and further in view of the foregoing remarks, it is respectfully submitted that the application is in condition for allowance. Accordingly, it is respectfully requested that every pending claim in the present application be allowed and the application be passed to issue.

Please charge any additional fees required or credit any overpayments in connection with this paper to Deposit Account No. 02-0200.

If any issues remain that may be resolved by a telephone or facsimile communication with the applicants' attorney, the examiner is invited to contact the undersigned at the numbers shown below.

BACON & THOMAS, PLLC
625 Slaters Lane, Fourth Floor
Alexandria, Virginia 22314-1176
Phone: (703) 683-0500
Facsimile: (703) 683-1080

Date: June 26, 2009

Respectfully submitted,

/Patrick M. Buechner/

PATRICK M. BUECHNER
Attorney for Applicants
Registration No. 57,504